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CORE AREA URBAN DESIGN PLAN

MURRAY V. JONES AND
ASSOCIATES LIMITED

EDMONTON
OCTOBER 1977

Chief Bull

WHITEFISH LAKE INDIAN
RESERVE NO. 128
CORE AREA URBAN DESIGN PLAN

Dear Sir:

We have pleasure in submitting our study of the Whitefish Lake Core Area. We trust that you will find the attached interesting, but more particularly useful, as you proceed with development of the Core Area.

The report consists of a series of drawings which can be divided into four sections.

1. The background to the study - existing uses and present form, Maps 1-4.
2. The Principles applied to the design process, Map 5.
3. Individual use areas as they exist, their conflicts, problems and positive strengths and our proposed solution - the design analysis, Maps 6-12.
4. Two composite plans of the entire Core Area showing alternatives, Maps 13-14.

2.

We have also provided two sets of larger scale drawings which you can use for display and discussion purposes with the Band as a whole. Included with these larger drawings are two sheets of photographs which helped us in our work and will add interest to the display.

The report is meant to guide your Core Area planning group over the next 5-10 years. Specific detail design work is needed as each part of the Core Area is developed, redeveloped, altered and completed. Design changes to the suggestions made are to be expected, however apart from major alternatives to the concepts, detail adjustments can be easily accommodated.

We have enjoyed doing this project and look forward to the next opportunity to work with you and your people.

Yours truly,
MURRAY V. JONES AND ASSOCIATES LIMITED

Keith Driver

Keith Driver
Vice-President,
Western Region.

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WHITEHORN NO 128

CORE AREA URBAN DESIGN PLAN

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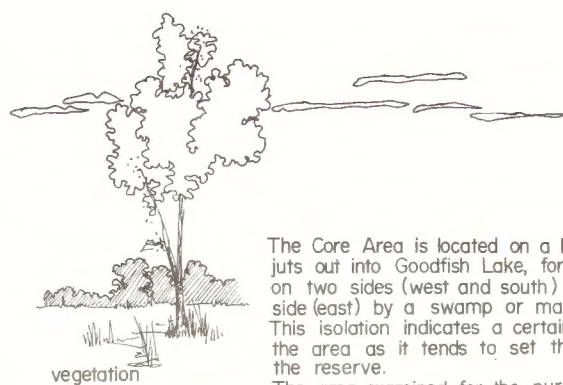
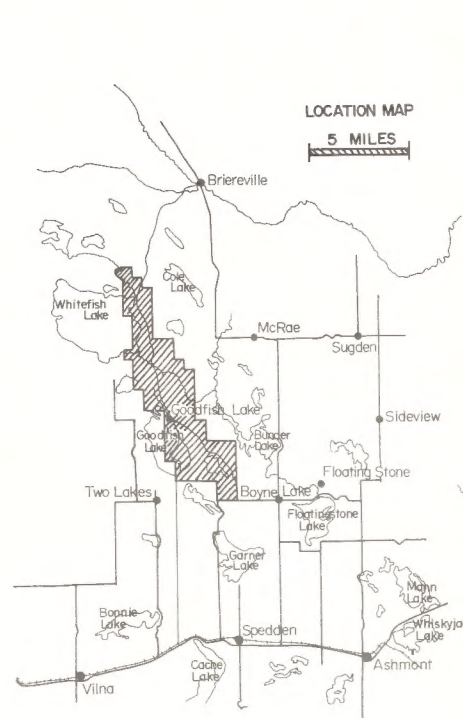
WHITEFISH INDIAN BAND NO 128

CORE AREA URBAN DESIGN PLAN 1

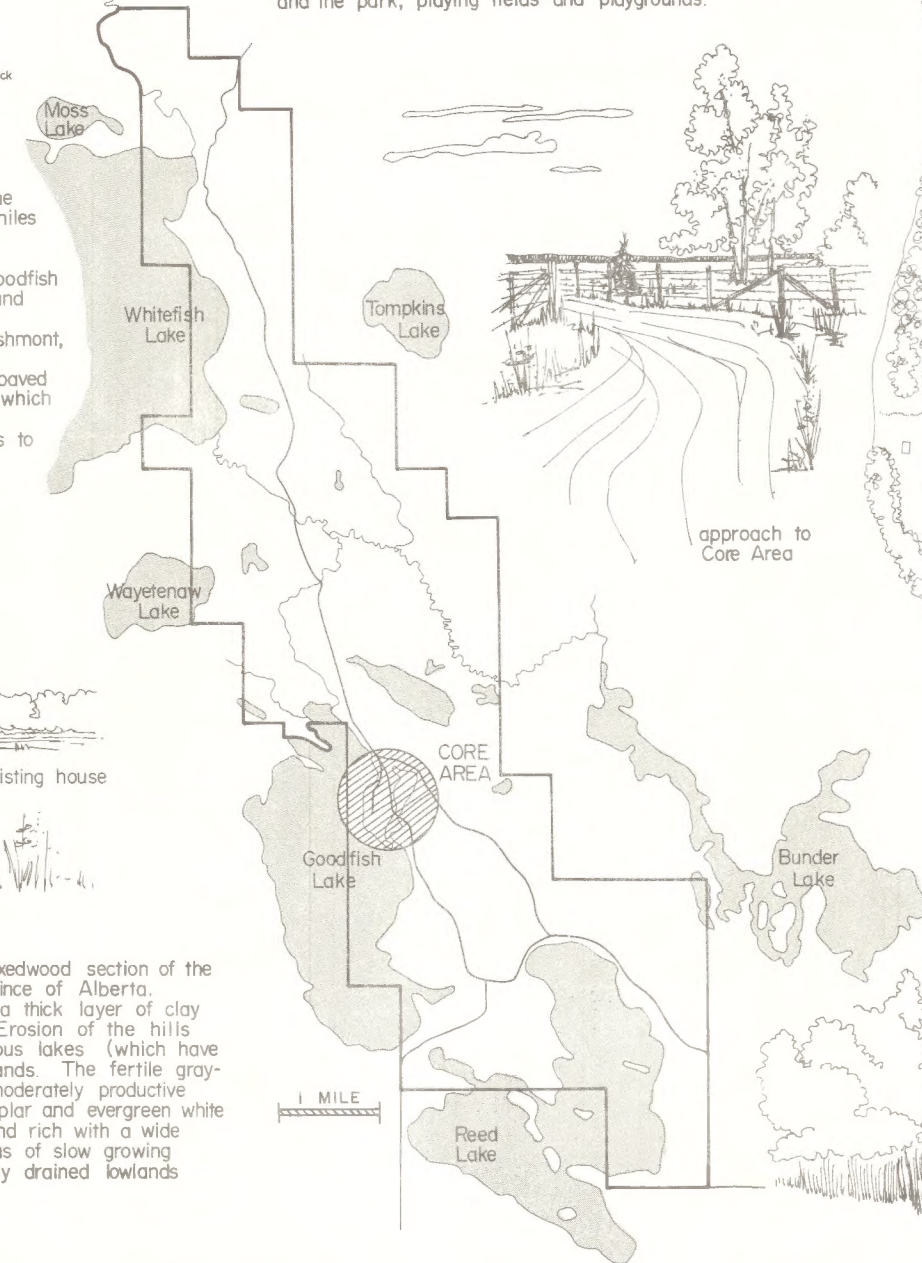
LOCATION PLAN

The Whitefish Indian Band No. 128 is located some 9-10 miles north of Highway 28 and about 40 miles north west of the town of St. Paul. The reserve is located on three major lakes the Whitefish Lake at its northern end, the Goodfish Lake about midway along the west boundary and Reed Lake on its southern boundary. The nearest towns are Vilna, Spedden and Ashmont, located on Highway 28. Good highway access is provided first by the paved Highway 28, and then by good gravel roads which link Highway 28 to the band and thence to Highway 36 and Lac La Biche some 40 miles to the north. The reserve lies in townships 61 and 62 and ranges 12 and 13, west of the 4th meridian.

The reserve is located within the Boreal Mixedwood section of the general vegetation classification for the province of Alberta. Glaciation of the underlying shales provided a thick layer of clay rich soil materials and rolling topography. Erosion of the hills with the soil being deposited in the numerous lakes (which have since drained) have provided extensive flatlands. The fertile gray-wooded soil has encouraged the growth of moderately productive mixedwood forests containing a variety of poplar and evergreen white spruce. The undergrowth is especially lush and rich with a wide variety of plant and animal life. Large areas of slow growing black spruce muskeg swamp cover the poorly drained lowlands and flat areas.



The Core Area is located on a high, rising piece of land which juts out into Goodfish Lake, forming a peninsular of land surrounded on two sides (west and south) by open water and on the third side (east) by a swamp or marsh. This isolation indicates a certain uniqueness and importance to the area as it tends to set the area apart from the rest of the reserve. The area examined for the purpose of this study is all that up to the main north south reserve road and includes the churches and residences at the north end of the peninsular. The main part or the Core Area is that at the southern end and includes the health unit, schools, gymnasium, ice arena, administration building, sewing centre and quonset hut workshop. It also includes the residences for teachers, and the residences located immediately adjacent and the park, playing fields and playgrounds.



existing house



approach to Core Area

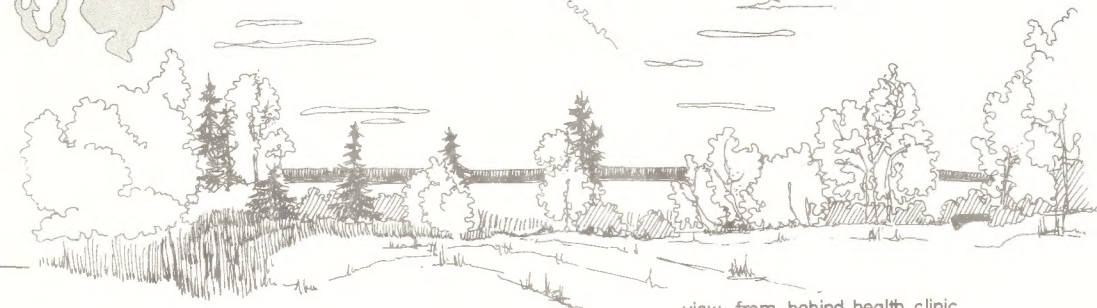


CORE AREA

100 FEET



dense trees



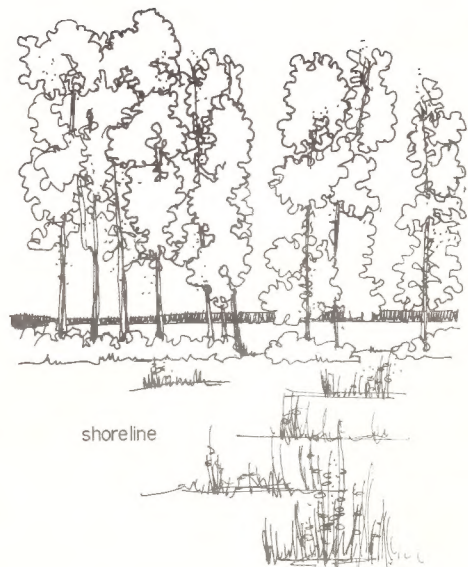
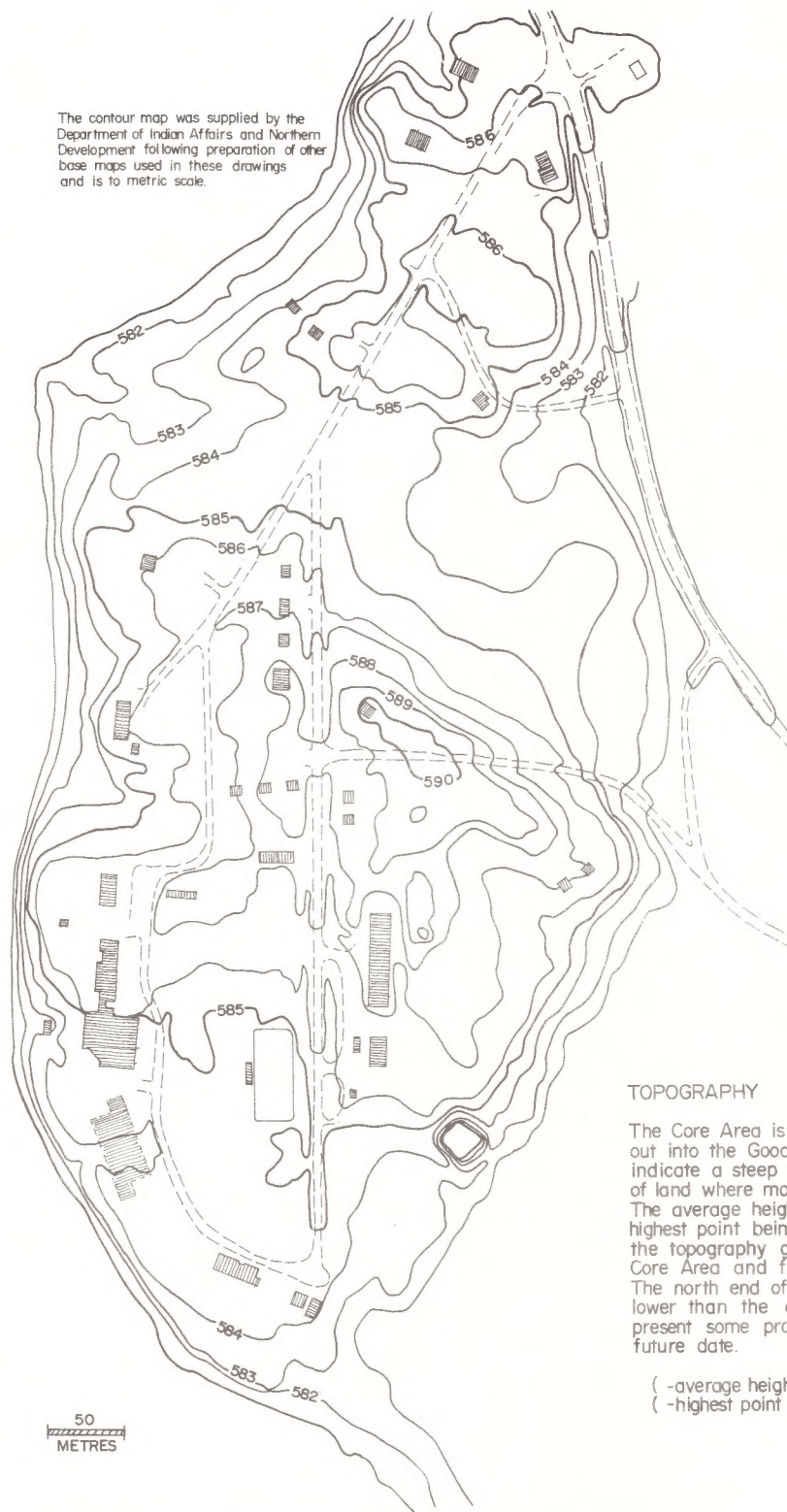
view from behind health clinic

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The contour map was supplied by the Department of Indian Affairs and Northern Development following preparation of other base maps used in these drawings and is to metric scale.



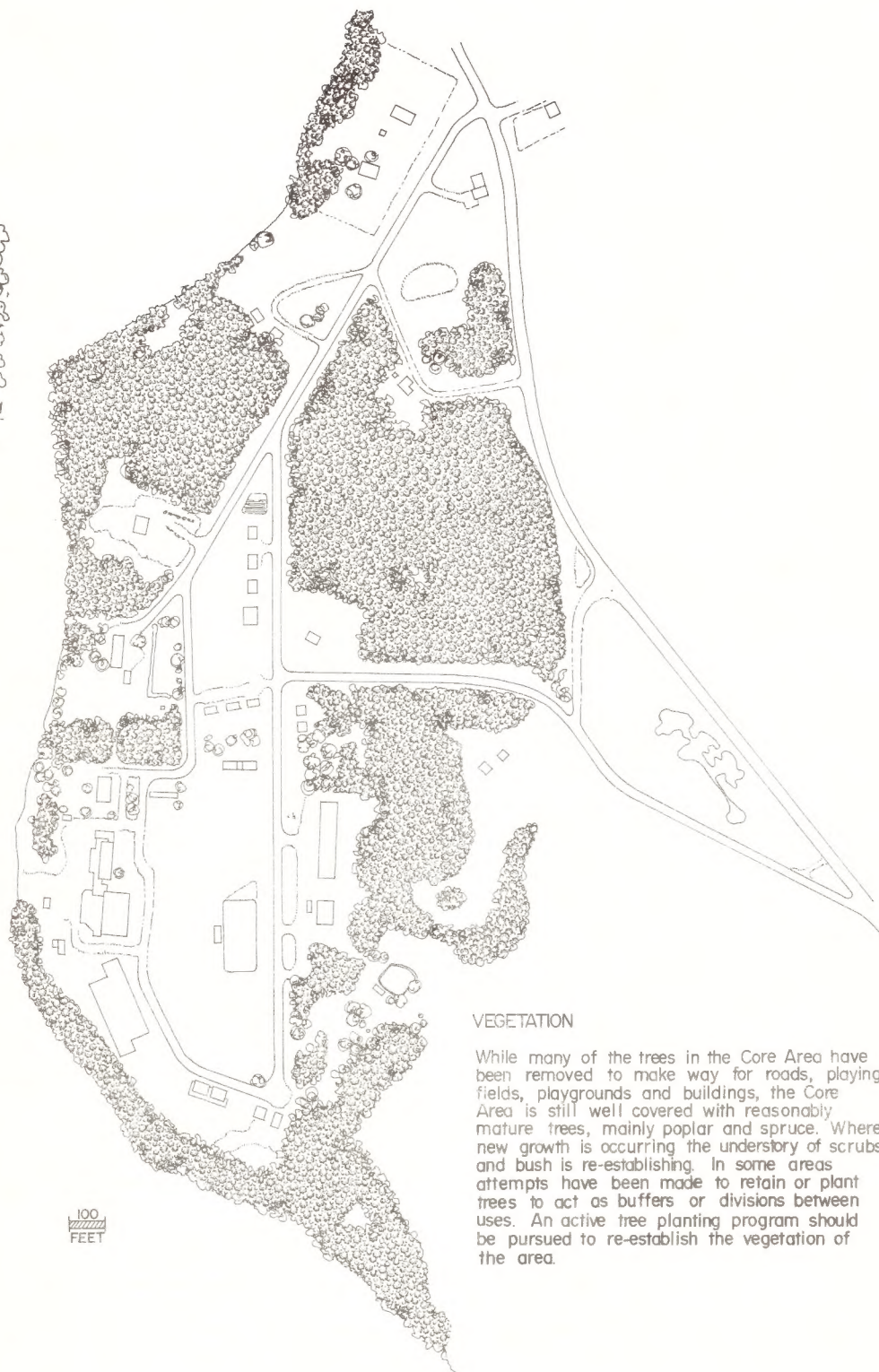
shoreline

TOPOGRAPHY

The Core Area is a peninsula of land which juts out into the Goodfish Lake. The topography and contours indicate a steep rising bank with a relatively flat table of land where most of the development has occurred. The average height is 5 metres above lake level with the highest point being 10 metres above the lake. Because of the topography good views are obtained over the Core Area and from selected points out over the lake. The north end of the Core Area tends to be generally lower than the central part — a fact which will present some problems in servicing at some future date.

- (-average height above lake 16.4 feet)
- (-highest point above lake 32.8 feet)

50
METRES



VEGETATION

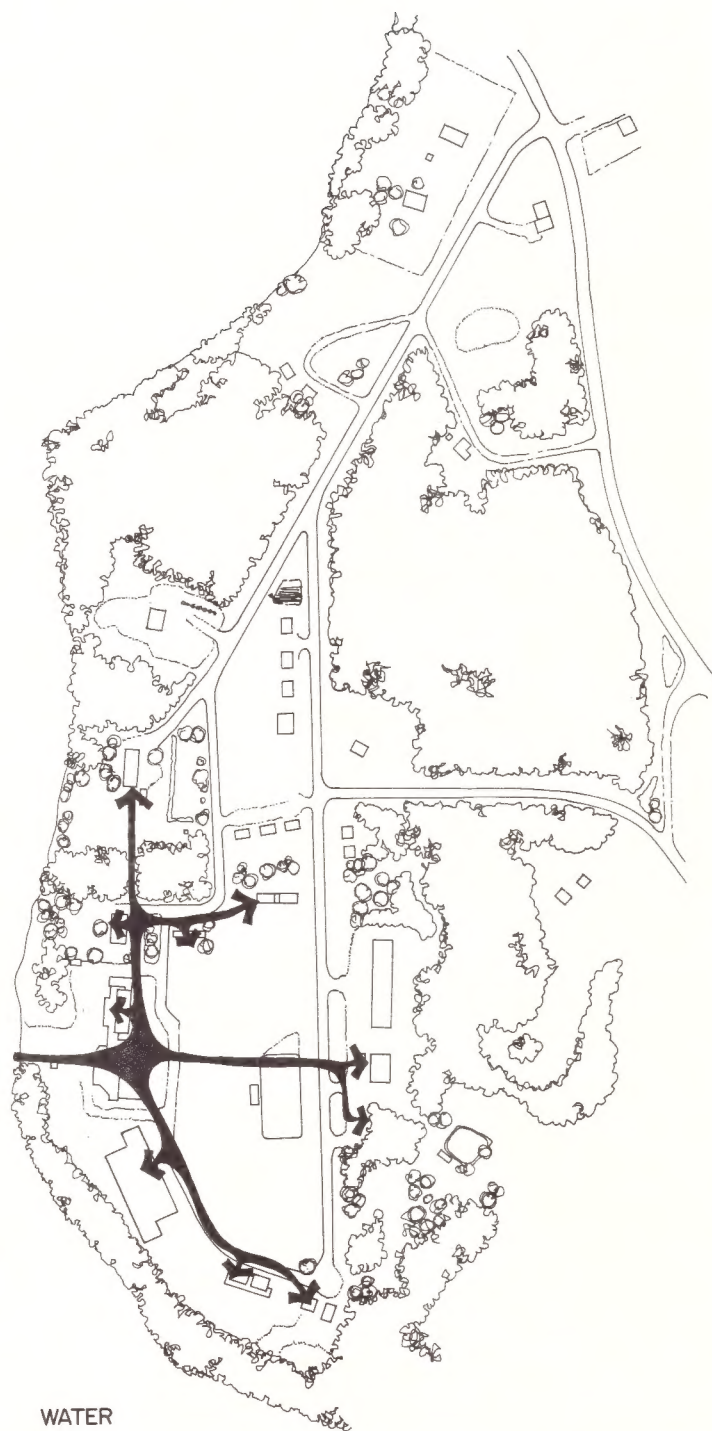
While many of the trees in the Core Area have been removed to make way for roads, playing fields, playgrounds and buildings, the Core Area is still well covered with reasonably mature trees, mainly poplar and spruce. Where new growth is occurring the understory of scrubs and bush is re-establishing. In some areas attempts have been made to retain or plant trees to act as buffers or divisions between uses. An active tree planting program should be pursued to re-establish the vegetation of the area.

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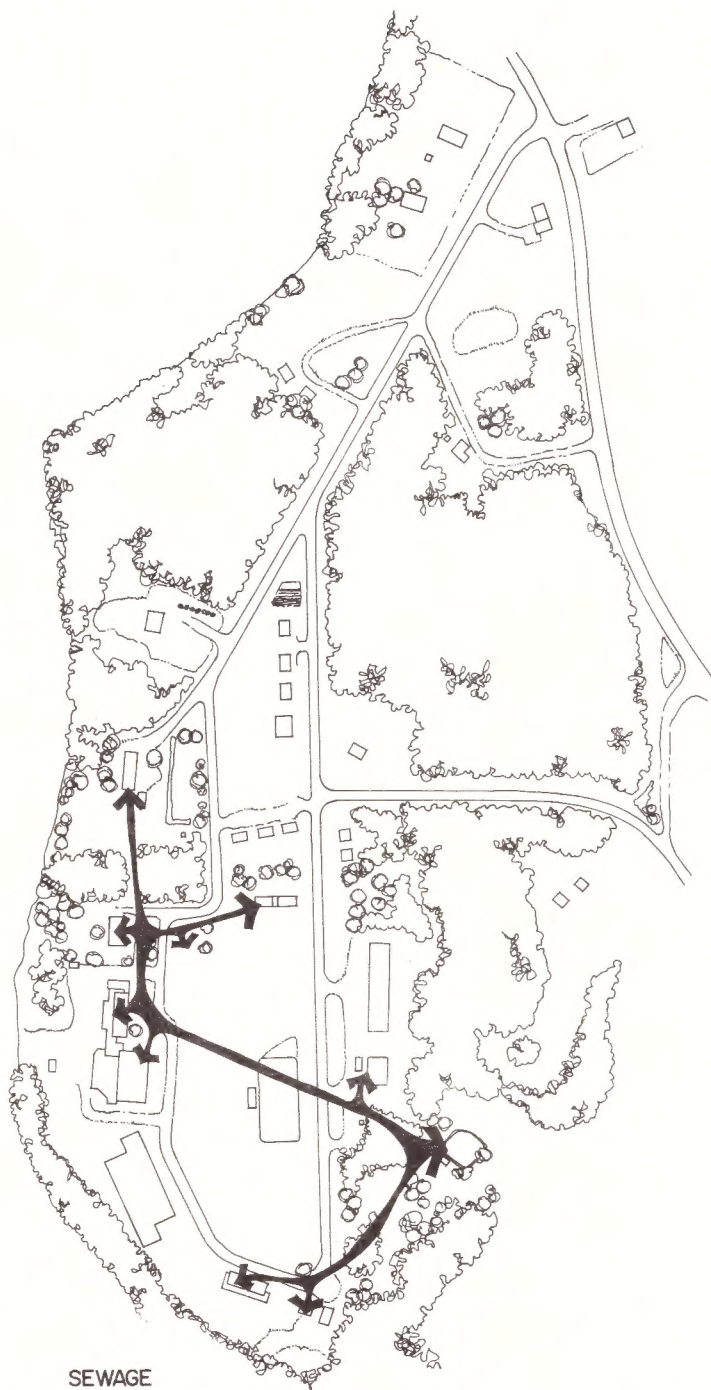
view approaching Core Area





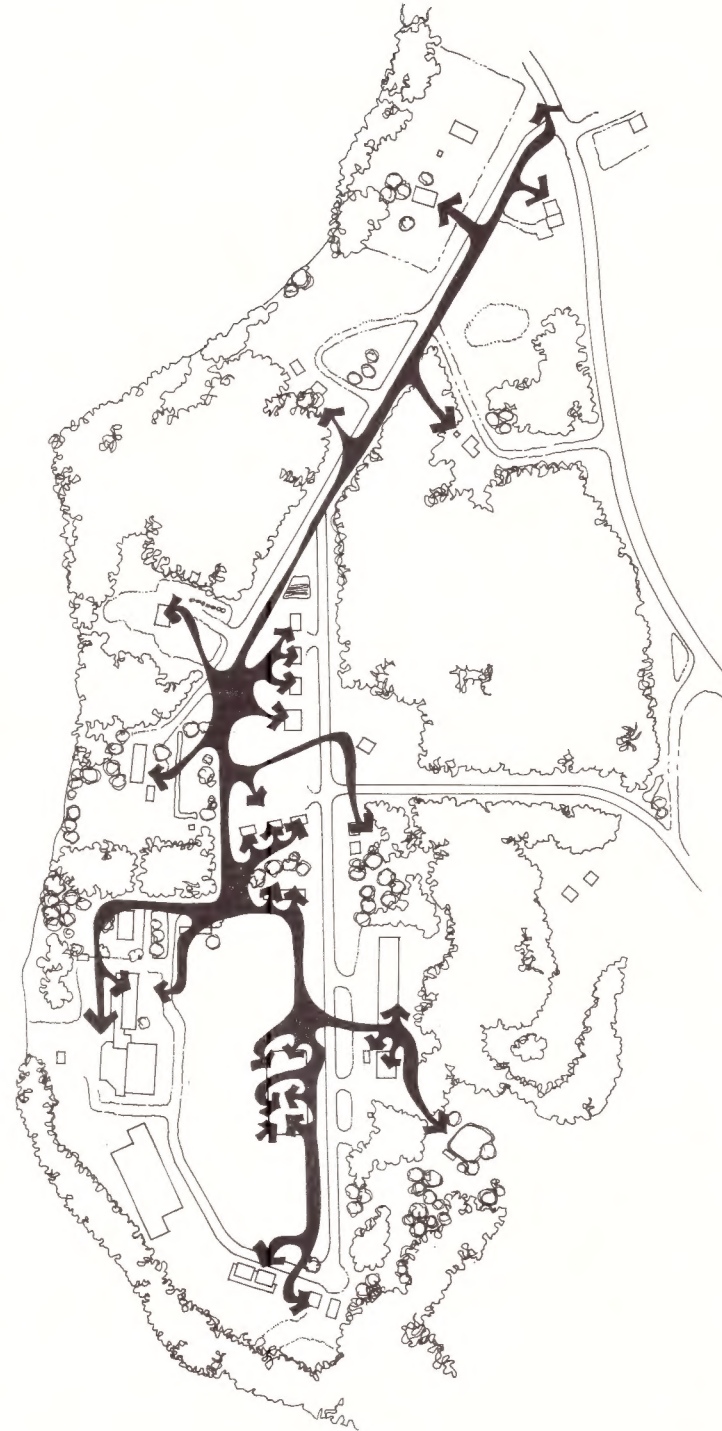
WATER

Water is presently pumped from the Goodfish Lake through a pumphouse treatment plant and thence to various buildings in the Core Area. The following buildings are served: schools, gymnasium, administration building, sewing centre, water pump, teacherage, trailer home, nursing station, new arena, and portable classrooms. The rest of the Core Area is not supplied with a direct water supply. Their supply like most houses on the reserve is provided by a Band operated water distribution service whereby a water truck fills up with water at the Band water pump and each residence has a storage tank for a limited storage (about 500 gallons). The residences in the Core Area are supplied with water in this way. Water is provided at the pumphouse at 54 psi which is sufficient pressure to provide water at all points in the Core Area (provided the distribution system is extended). However, the pressure is insufficient for adequate fire protection and firefighting purposes. The problem, however, can only be resolved by increasing the pressure and storage capacity which in turn requires a change in the power supply to the reserve. The extent of this problem should be assessed through detailed engineering studies.



SEWAGE

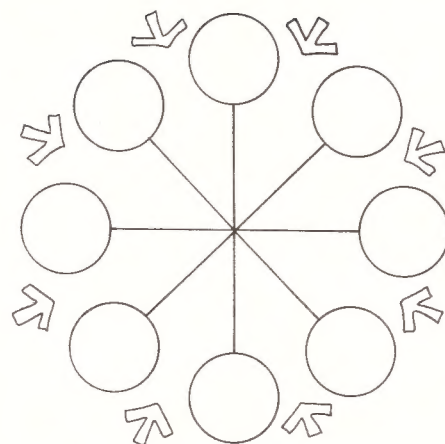
The treatment of sewage from the Core Area is through a rotating biological compactator. The plant and preliminary holding lagoon is located on the east side of the Core Area adjacent to the swamp. The swamp acts as the final receiving lagoon for effluent. In November 1976 tests were conducted and it was found that the influent contained 65 ppm Bod while the effluent contained 5 ppm Bod. Sewage is collected from the health unit, teacherage, schools, gymnasium, ice arena, administration building, sewing centre and portable classrooms, and delivered by way of an underground system to the treatment plant. While the capacity of the plant is not questioned at this stage, the collection system does not appear to have been changed from that described in a Nesco Consulting Limited report of May 1975 in which comments were made regarding the inadequacy of both the size and gradient of the sewer mains. One question remains unanswered, and that is: Is the water taken from the Goodfish Lake in any way affected by the effluent outflow of the sewage plant into the swamp (and then into this same lake). These questions should be answered by a more detailed engineering study which would assess the system and its possible extensions.



POWER

Power is supplied by Alberta Power Limited and is a single phase supply. The system serves all buildings in the Core Area. The main problem is that 3-phase supply is essential if the water pressure is to be improved, adequate fire protection is required, artificial ice is to be made at the arena, industry is to be developed and the proposed administration building. This change requires a more detailed engineering study to assess the system, future loading extensions and costs.

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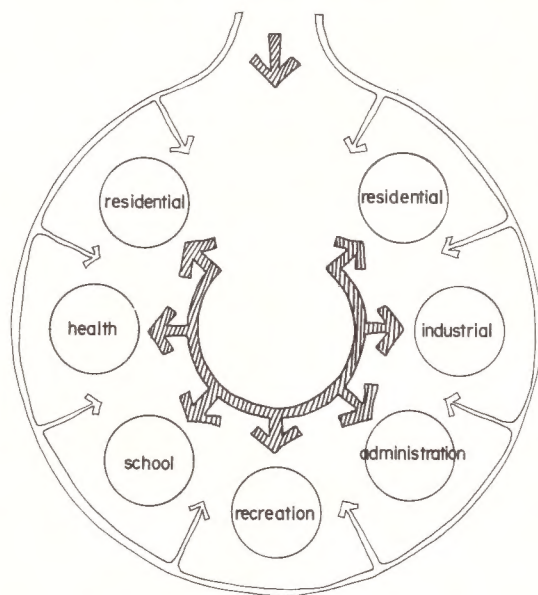
PLANNING PRINCIPLES

Role of Core Area:

To be the social, economic, education, recreation and administrative centre for the Band.

Principles:

1. To provide a focus for each of the main use functions of the Core Area,
 - administrative, health, social and commercial
 - recreation
 - education
 - industry
 - senior citizens
 - residential and
 - active and passive park areas.
2. To provide a rational circulation system for various modes of traffic and traffic functions,
 - pedestrian and
 - automobile; private vehicles
 - service vehicles and parking.
3. To indicate the range of problems that must be tackled in order to achieve a rational plan,
 - utilities
 - servicing
 - use of existing facilities and
 - the interrelationships between uses.



DESCRIPTION OF PLAN EVOLVED

The Core Area at present indicates a variety of land and building uses around an open central area. There is little logic in the present distribution of land uses such that residential uses are located adjacent to industry. Social activities are scattered, education facilities are scattered and circulation is such that automobile traffic and childrens play areas interact. It is, however, very obvious that the Core Area has developed around a circular traffic system. The various land uses are attached to this circulation system rather like Indian teepees around the Indian meeting circle. Thus using this basic idea the Core Area Plan has evolved where each use, both existing and proposed, has been allocated one space about the central meeting area. To achieve this will to some extent entail relocating some existing uses (existing school, existing social centre) or assigning alternative locations or alternative functions to existing uses (senior citizens nursing home).

The plan then establishes for each prime land use function a place around the circle, ties each together with both a vehicular and pedestrian circulation system, and focuses the core on four main activity areas.

The Administrative Centre which includes,

- the commercial centre
- the health administration offices
- the band administration and
- some social activity centres (pool room, snack bar, meeting area).

The Industrial Area (work centre) which includes,

- the present workshop
- a proposed workshop and cleaning establishment
- a proposed industrial training centre and
- a possible handicraft industry centre.

The Education Area (school) which includes,

- the present school (extended)
- the gymnasium
- the teacherage and
- the school playgrounds.

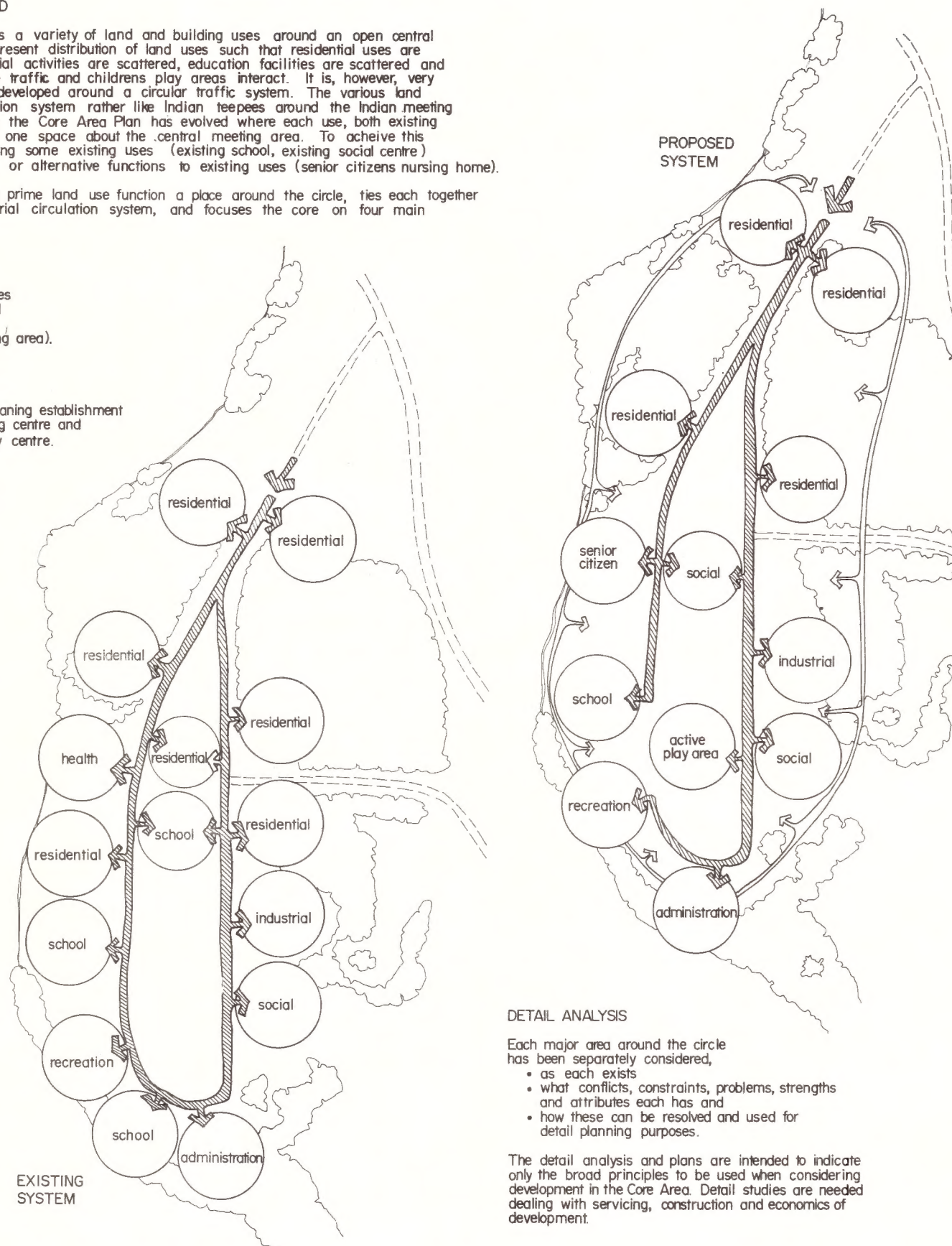
The Recreation Area which includes,

- the arena and outdoor playing fields
- the central area for active sports and
- the lakefront area for more passive activities.

In addition to the four clearly defined functions indicated above there is the very large and scattered function called residential which includes,

- senior citizens housing and nursing home
- residential land use of a scattered nature
- residential land use in a concentrated area and
- the church uses.

Thus the circle is re-established and more clearly defined, the land use functions consolidated and improved, and the circulation system made complementary to the many functions of the Core Area.



DETAIL ANALYSIS

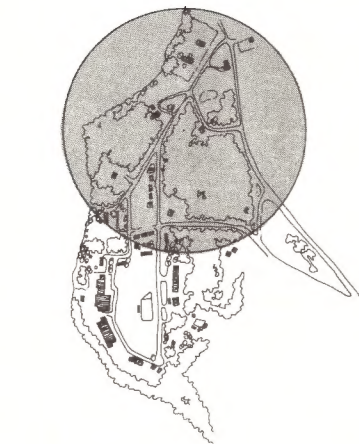
Each major area around the circle has been separately considered,

- as each exists
- what conflicts, constraints, problems, strengths and attributes each has and
- how these can be resolved and used for detail planning purposes.

The detail analysis and plans are intended to indicate only the broad principles to be used when considering development in the Core Area. Detail studies are needed dealing with servicing, construction and economics of development.

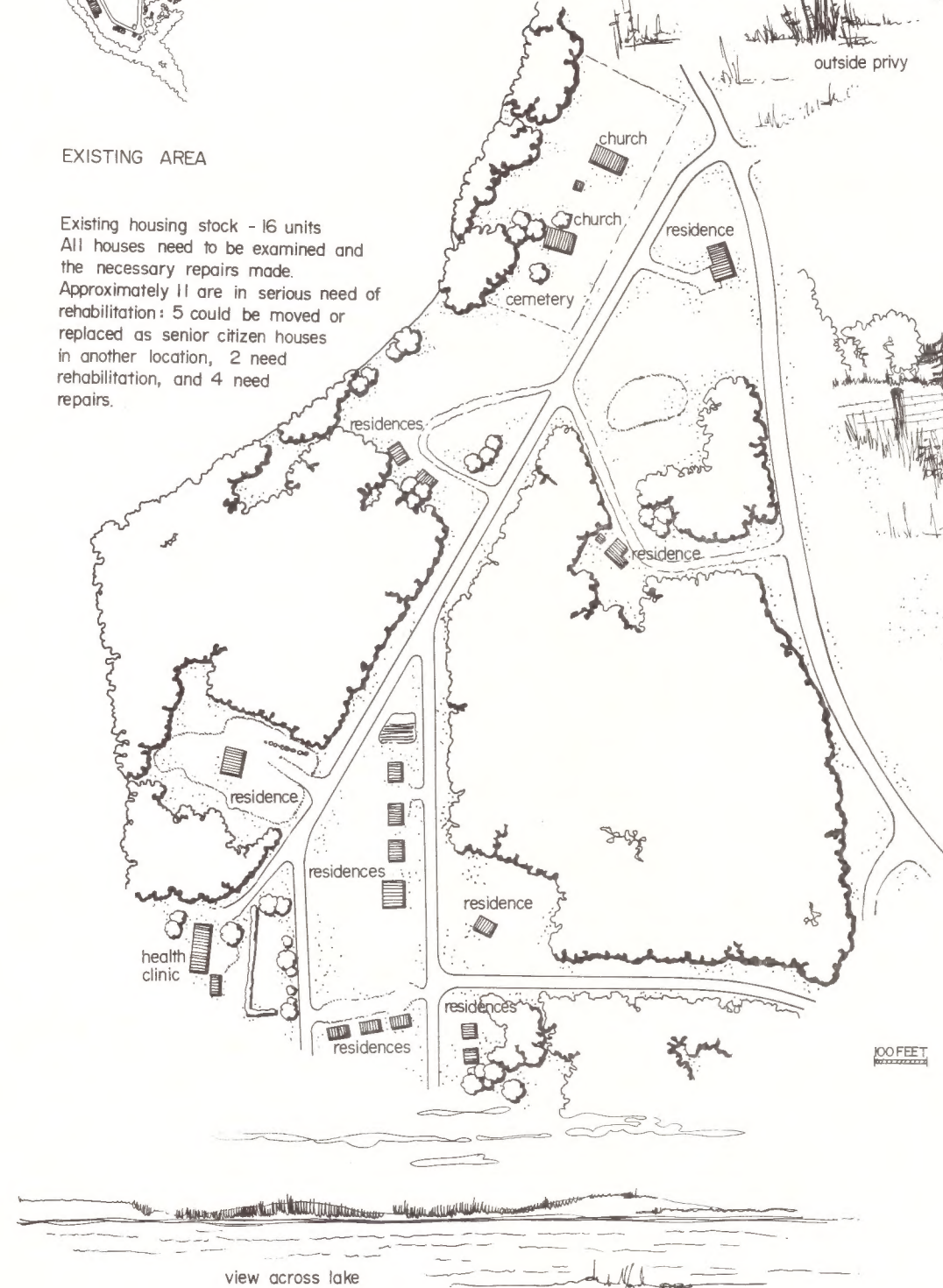
WITH THE FUTURE IN MIND NO 128

CORE AREA URBAN DESIGN PLAN RESIDENTIAL AREA SITE ANALYSIS



EXISTING AREA

Existing housing stock - 16 units
 All houses need to be examined and
 the necessary repairs made.
 Approximately 11 are in serious need of
 rehabilitation: 5 could be moved or
 replaced as senior citizen houses
 in another location, 2 need
 rehabilitation, and 4 need
 repairs.

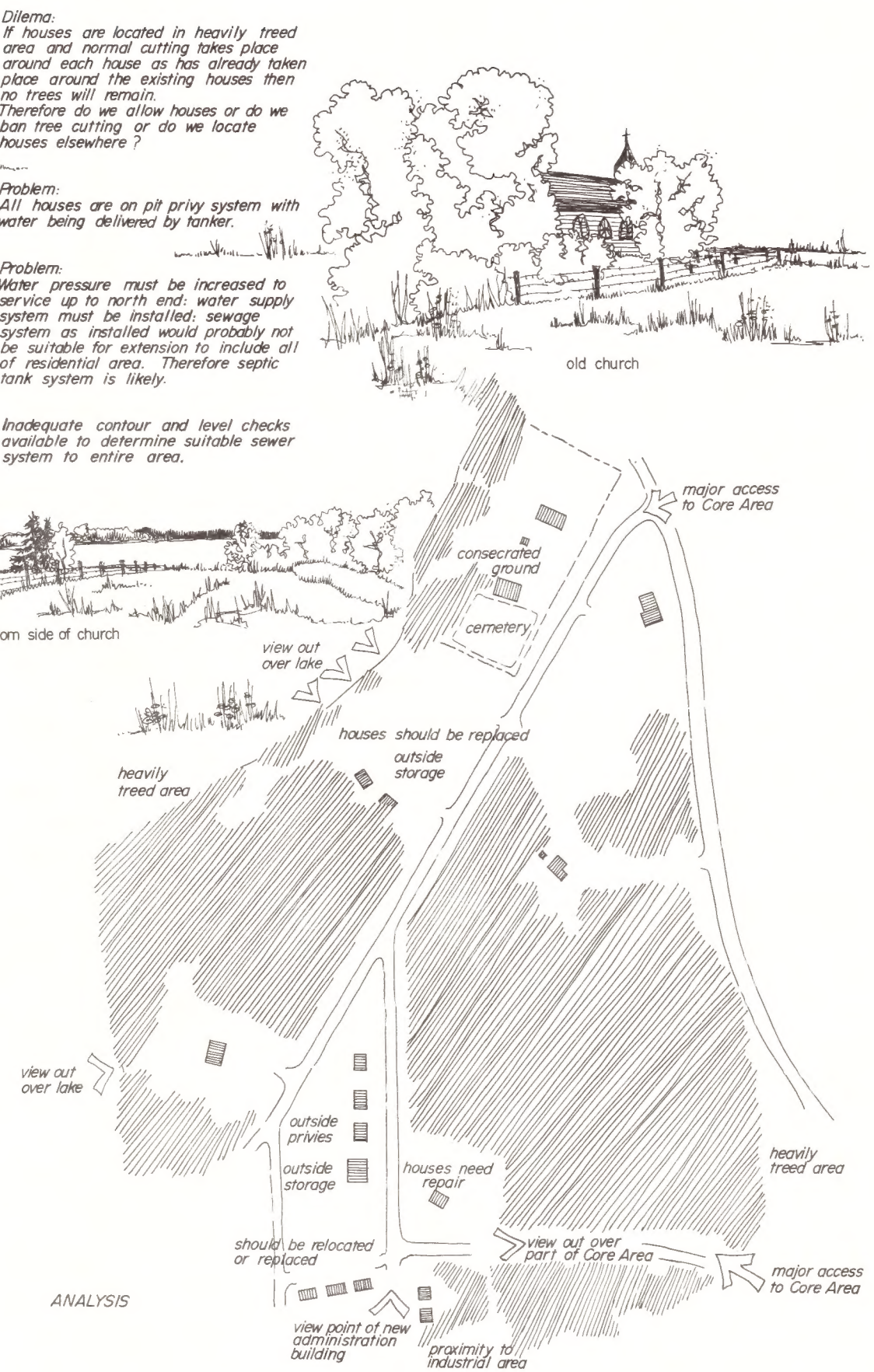


Dilema:
 If houses are located in heavily treed
 area and normal cutting takes place
 around each house as has already taken
 place around the existing houses then
 no trees will remain.
 Therefore do we allow houses or do we
 ban tree cutting or do we locate
 houses elsewhere?

Problem:
 All houses are on pit privy system with
 water being delivered by tanker.

Problem:
 Water pressure must be increased to
 service up to north end: water supply
 system must be installed: sewage
 system as installed would probably not
 be suitable for extension to include all
 of residential area. Therefore septic
 tank system is likely.

Inadequate contour and level checks
 available to determine suitable sewer
 system to entire area.



ANALYSIS

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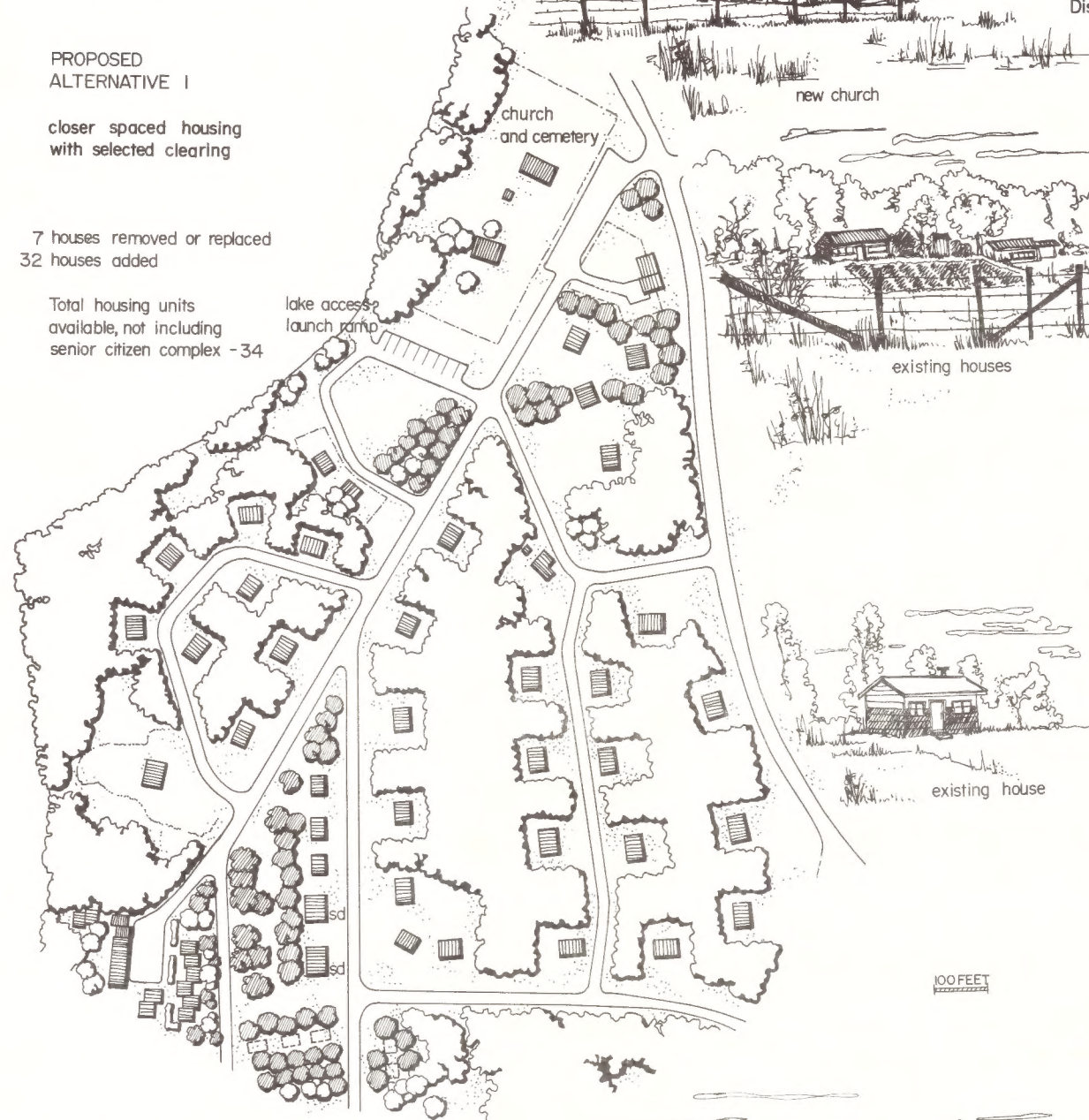
Note: No population and demographic studies were carried out to determine how much housing in this area would meet the demands for housing, family formation and population growth on the reserve. Preliminary indications show that within the next ten years there will be a demand for some 55 houses on the reserve. Not all of these will be built in the Core Area. Thus the 34 housing units shown should meet most of the anticipated need.

PROPOSED ALTERNATIVE 1

closer spaced housing
with selected clearing

7 houses removed or replaced
32 houses added

Total housing units
available, not including
senior citizen complex - 34

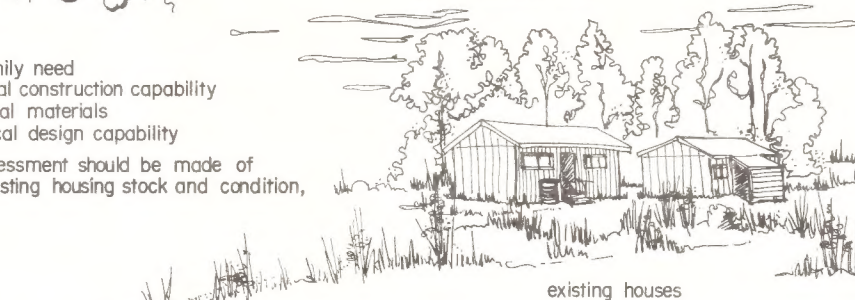


House Designs

House designs should reflect:

1. Family need
2. Local construction capability
3. Local materials
4. Local design capability

Before any houses are built an assessment should be made of population growth, housing need, existing housing stock and condition, and existing family size.



PROPOSED HOUSING AREA

- Advantages - provides resident population to support grocery store, laundromat, social centre, work centre and school
- allows for collective water and sewer services
 - provides housing area for future population growth
- Disadvantage - not traditional

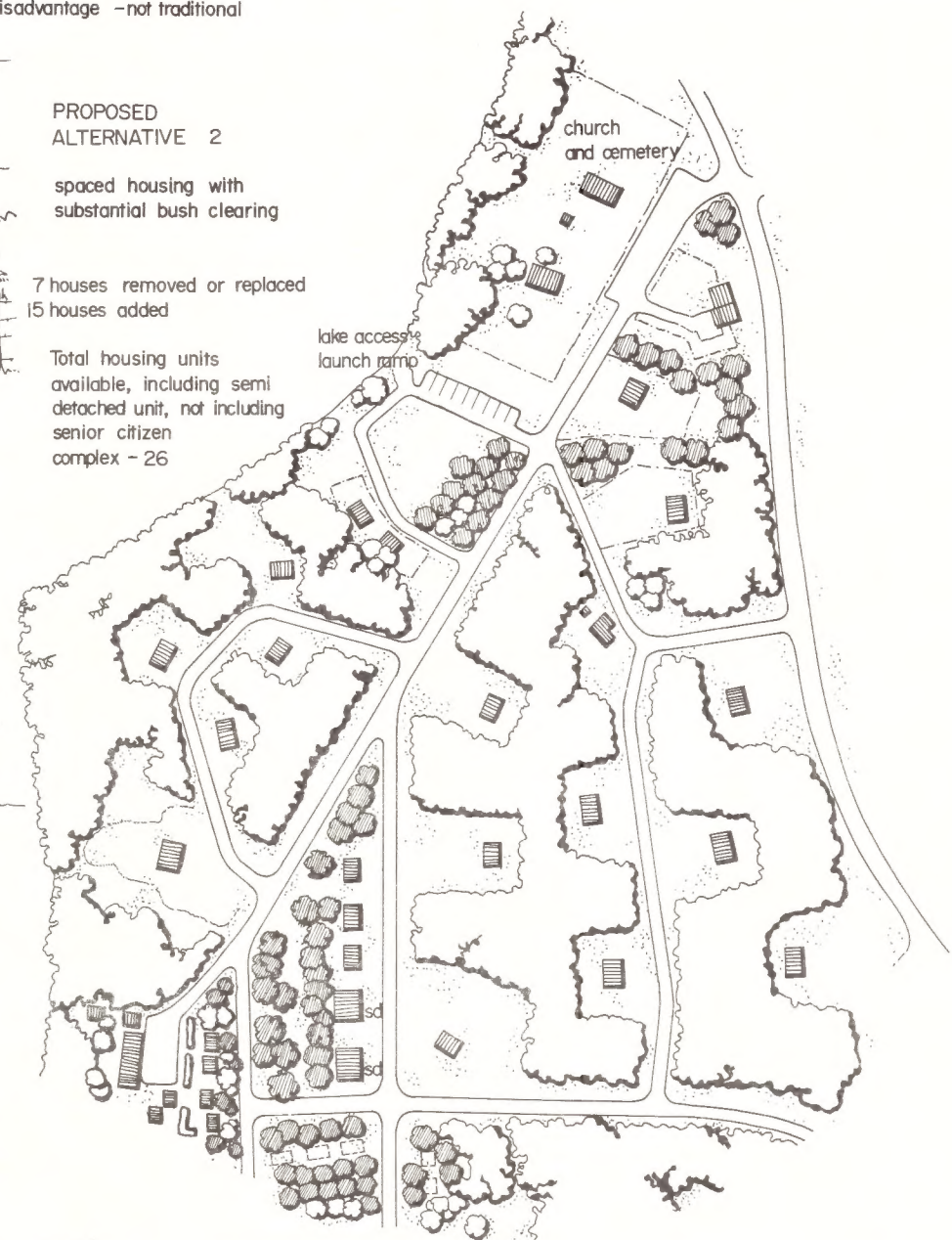
Development dependent upon Band desire to form community and growth pressures.

PROPOSED ALTERNATIVE 2

spaced housing with
substantial bush clearing

7 houses removed or replaced
15 houses added

Total housing units
available, including semi
detached unit, not including
senior citizen
complex - 26



Servicing

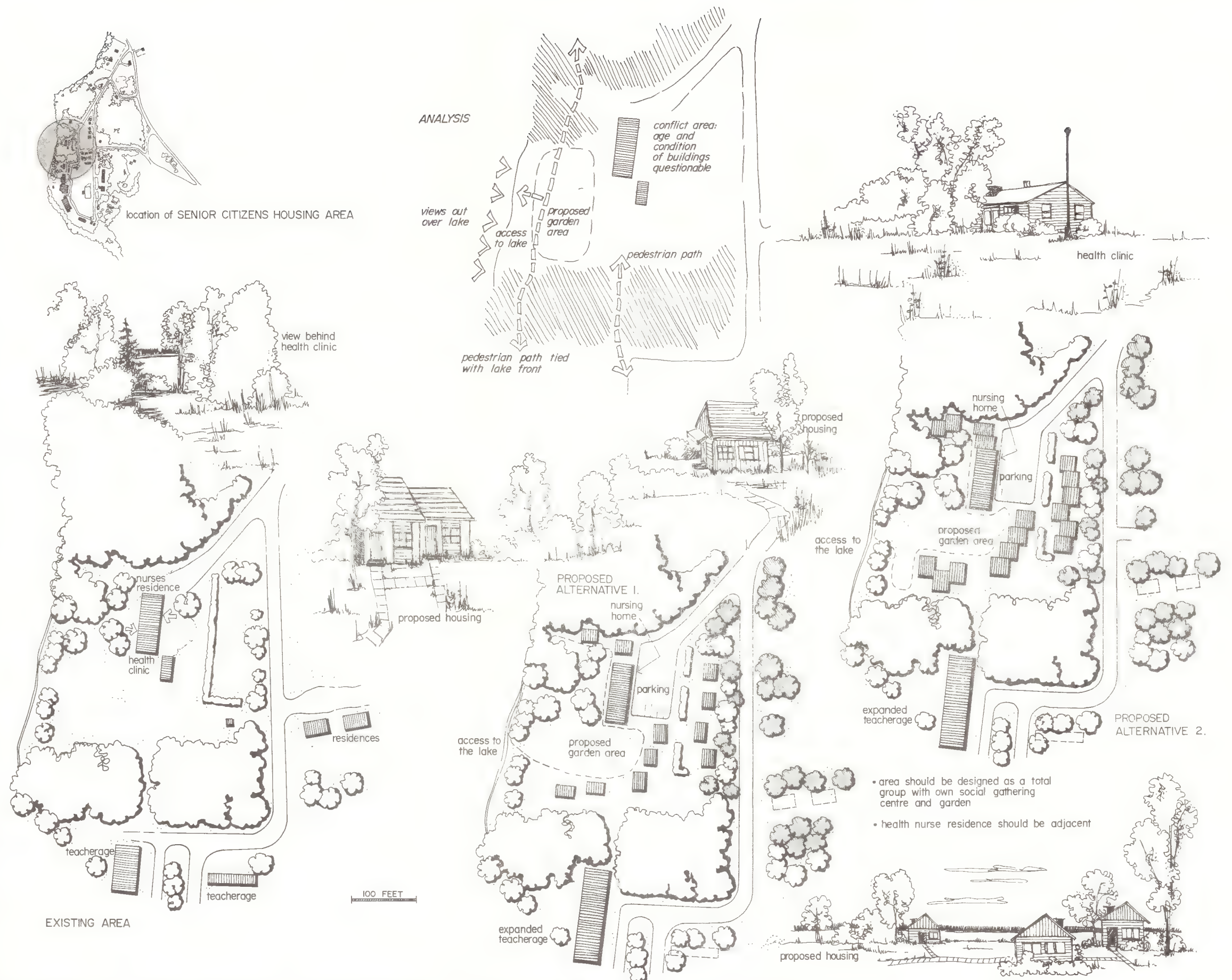
Water: With increased water pressure the extension of service lines to all houses could be possible.

Sewage: Houses in Alternative 2 could be on a septic tank system. However, ideal solution on both alternatives would be connection to existing sewage treatment plant. This would require an extension of the existing sewer service, its upgrading (size gradient, etc.), and an examination of engineering feasibility. Inadequate information exists regarding contours, slopes and heights relative to sewage treatment plant to confirm that either alternative can be serviced without lift pumps, etc. No costs have been obtained to upgrade service line.

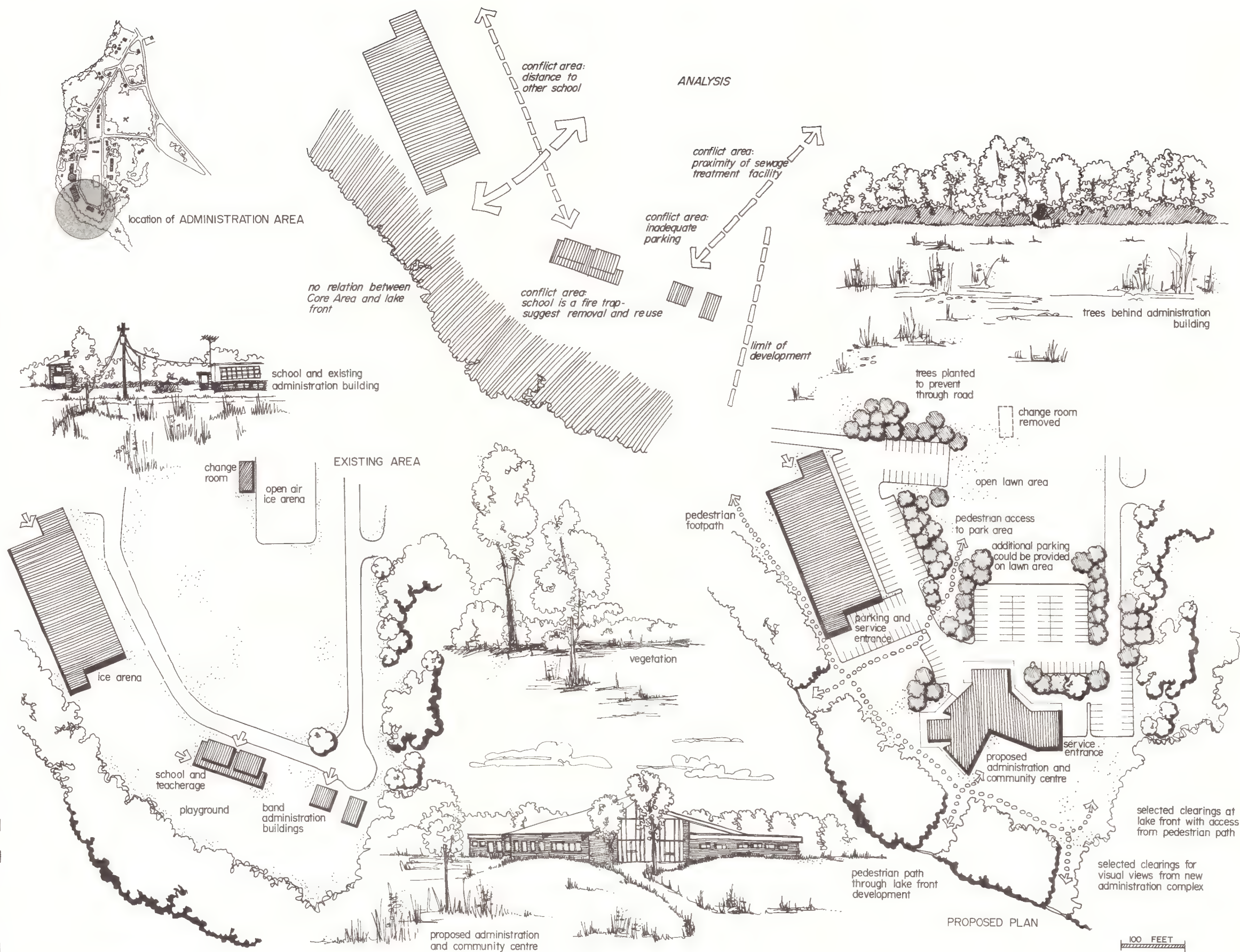
Power: All areas have access to power supply.

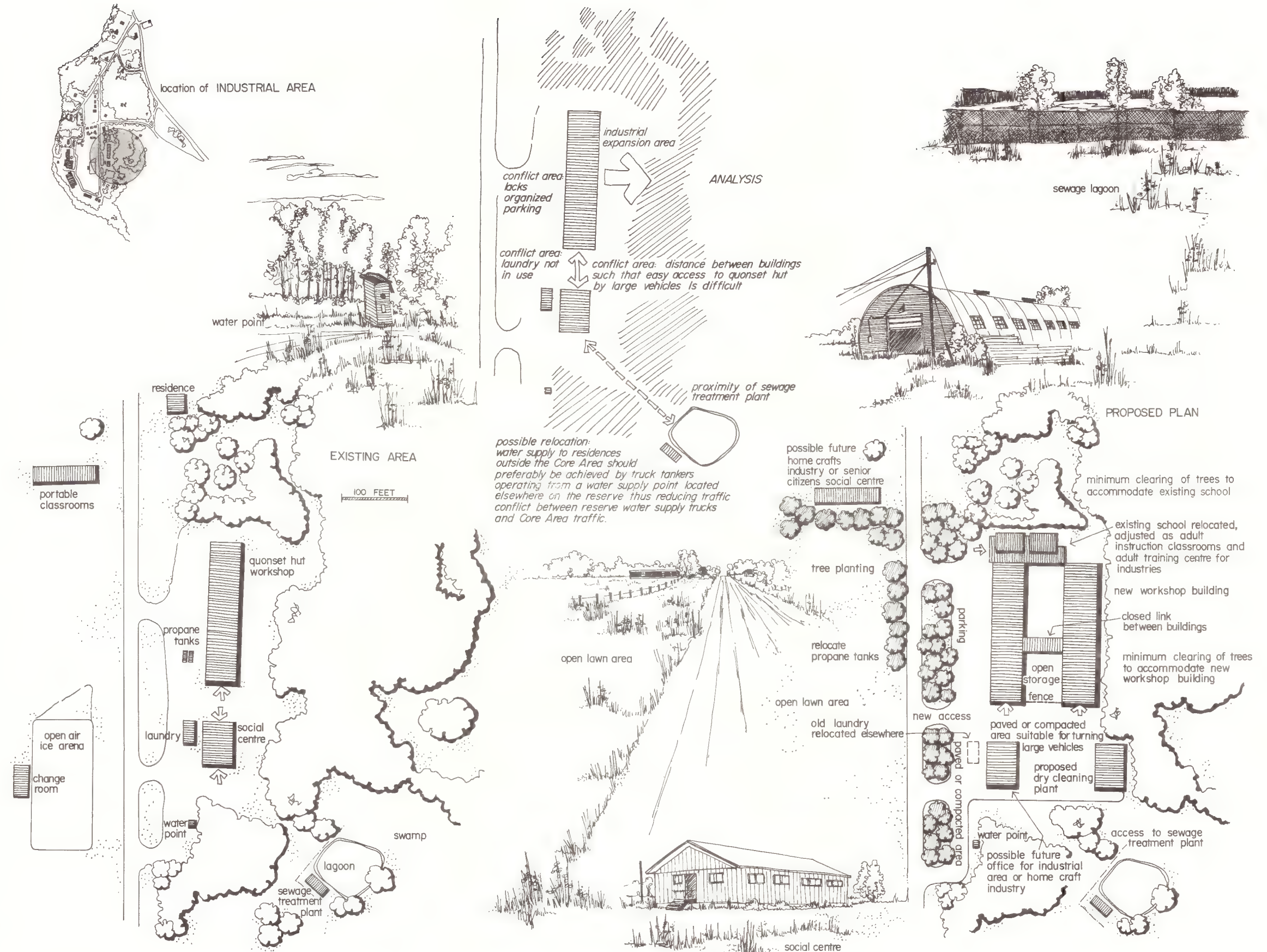
Gas: Individual units use independent propane supply.

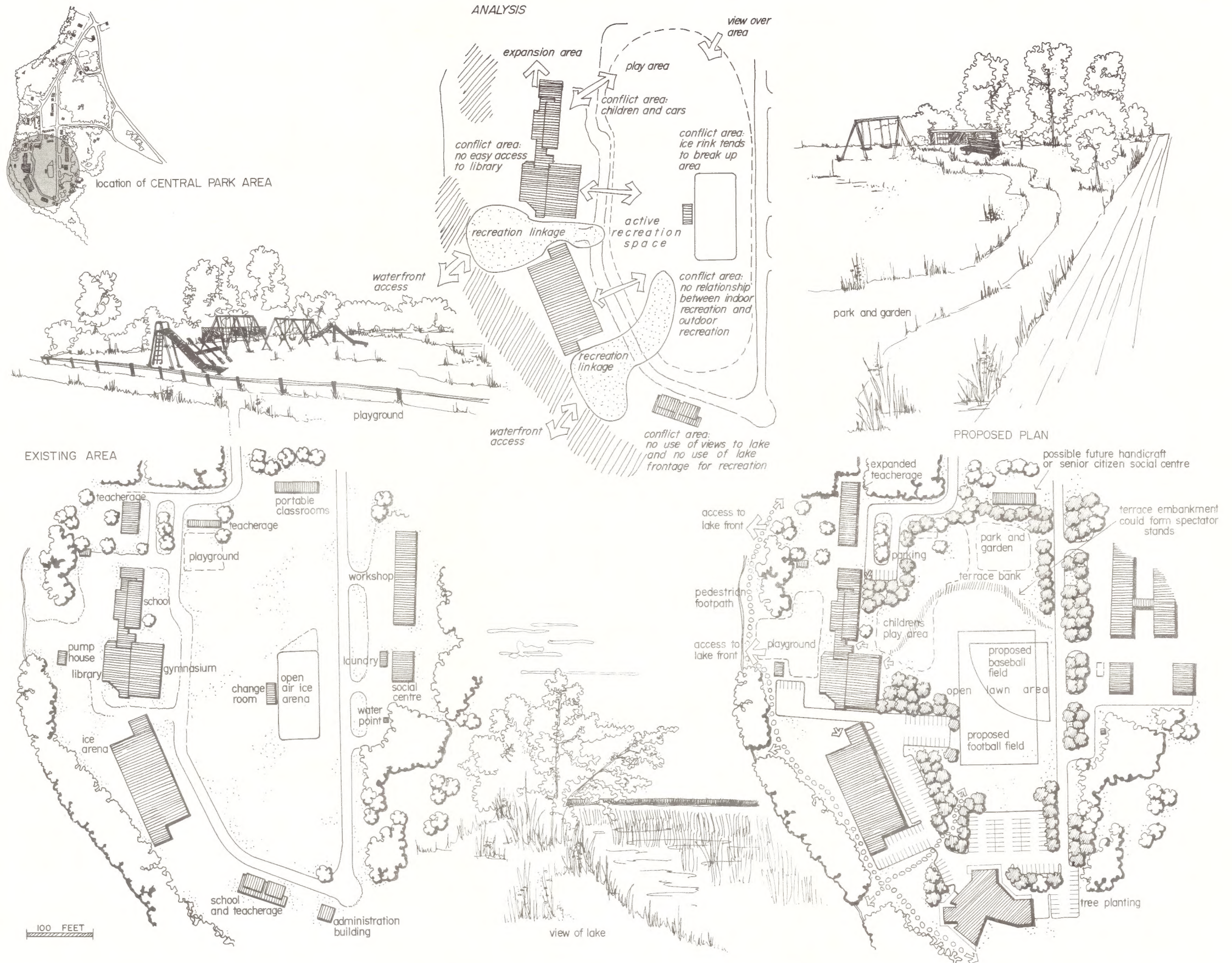
Telephone: Telephone system in the area has to be altered to permit all houses this service.

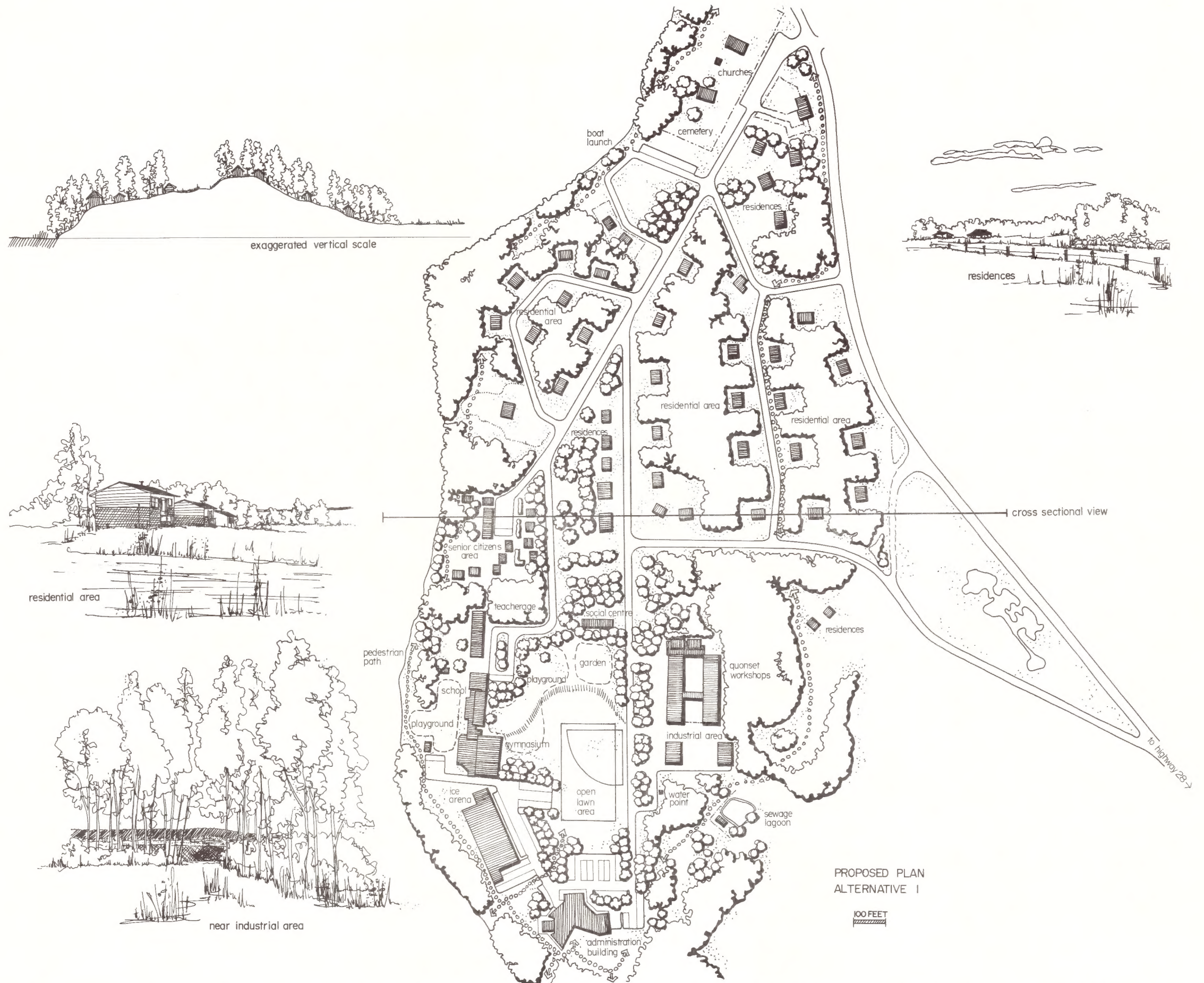




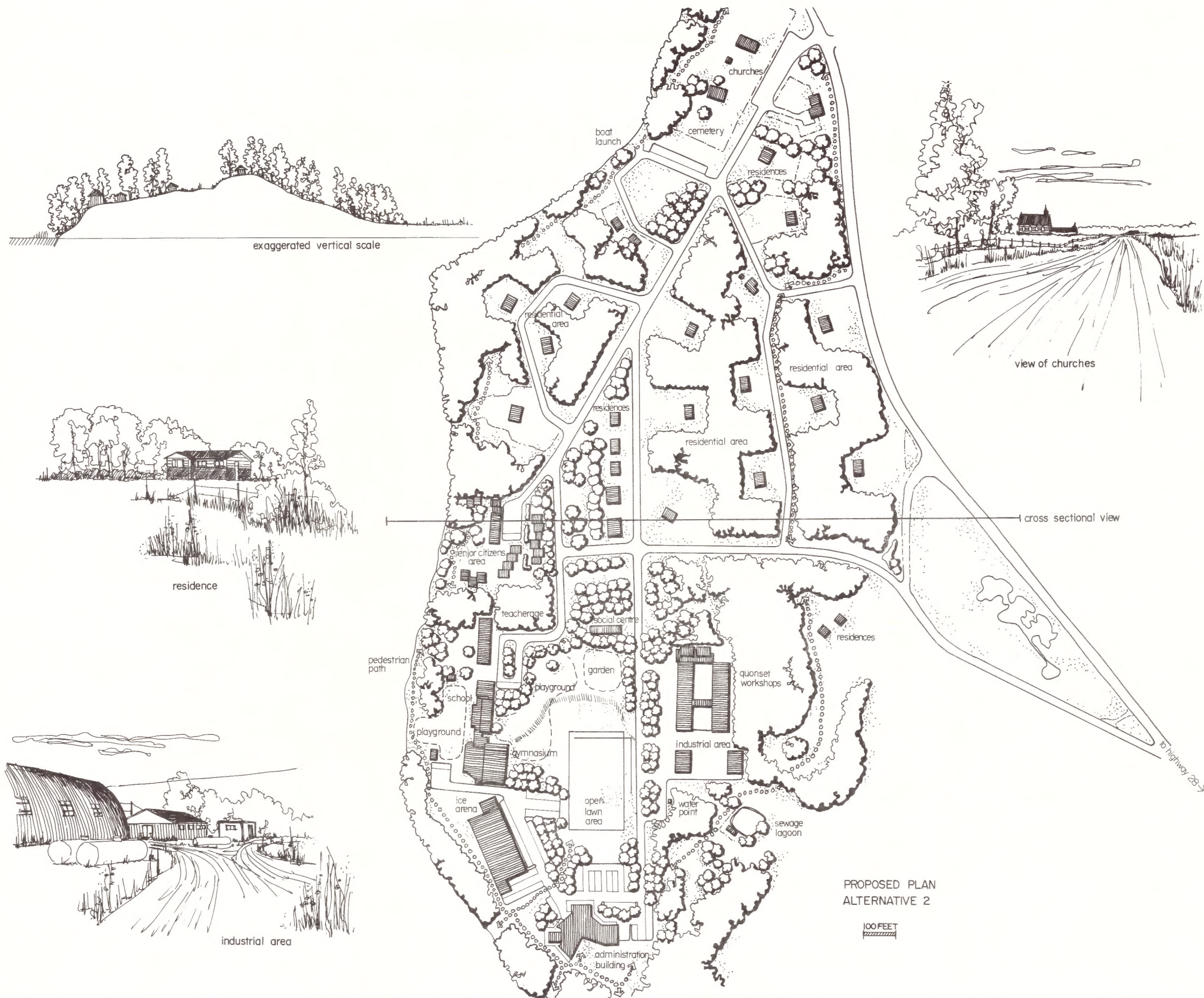








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